APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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SCHWABE, WILLIAMSON & WYATT, P.C. PACWEST CENTER, SUITE 1900 1211 SW FIFTH AVENUE PORTLAND, OR 97204	EXAMINER
	HOANG, PHUONG N

ART UNIT	PAPER NUMBER
2194	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/16/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

	Application No.	Applicant(s)
Office Action Summary	10/082,807	BAU ET AL.
	Examiner	Art Unit	
	Phuong N. Hoang	2194	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _07 February 2007_.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1 - 2, 4 - 10, 12 - 23, 25 - 44, 46 - 52, 54 - 65, 67 - 84_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) _12 - 19, 54 - 61_ is/are allowed.

6)☒ Claim(s) _1 - 2, 4 - 10, 20 - 23, 25 - 44, 46 - 52, 62 - 65, 67 - 84_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

WILLIAM THOMSON
SUPERVISORY PATENT EXAMINER

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _12/4/06_.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   Claims 1 – 2, 4 – 10, 12 – 23, 25 – 44, 46 – 52, 54 – 65, 67 – 84 are pending for examination.

2.   This office action is in response to the amendment filed 2/7/07.

3.   References, not found in this office action, can be found in previous office action.

Information Disclosure Statement

4.   The information disclosure statement filed 12/4/06 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

Claim Objections

5.   The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

       Claims 4 and 9 depend on claim 3 that has been deleted.

Claims 46 and 51 depend on claim 45 that has been deleted.

Claim Rejections - 35 USC § 103

6.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
>
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art
>
> are such that the subject matter as a whole would have been obvious at the time the invention was made to
>
> a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be
>
> negatived by the manner in which the invention was made.

7.   **Claims 1- 2, 10, 43 - 44, 52 are rejected under 35 U.S.C. 103(a) as being**

unpatentable over Ben-Shachar, US patent no. 6,209,018 in view of Arulanthu et

al, "Applying C++, Paterns, and Components to Develop an IDL Compiler for

CORBA AMI Callbacks", pages 1 - 13.

8.   **As to claim 1,** Ben-Shachar teaches a method of specifying an asynchronous

(asynchronous web service, col. 9 lines 25 - 45 and col. 16 lines 1 - 5) service within a

procedural programming environment, the method comprising the steps of:

providing a source code representation of at least a portion of a service logic

(logic, col. 30 lines 65 - 67), a callback method (callbacks, col. 17 lines 35 - 47, col. 25

lines 35 - 45, col. 26 lines 2 - 20), and

a compiler (IDL compiler generate client-side stubs and server-side stubs, col. 2 lines 35 - 65) to generate a client proxy object for interacting asynchronously (asynchronously) with the client using said callback method (callback to client).

Ben-Shachar does not explicitly teach at least one method (method declarations, page 8 col. 1 last paragraph) declared to be identifying a member variable declared to implement said callback method, assign the client proxy object to said member variable, and specifying one or more declarative annotations (figure 2) associated with said callback method to cause a compiler to generate one or more persistent components to maintain conversational state (maintain state, 3.2.1) related to the identified member variable.

Arulanthu teaches the callback cause the compiler to generate client proxy to interact with client (IDL compiler supports asynchronous method invocation callback; therefore, compiler generates proxy when client makes a asynchronous/callback method, introduction), at least one method (method declarations, page 8 col. 1 last paragraph) declared to be identifying a member variable declared to implement said callback method, and to assign the client proxy object to said member variable (object reference passed as parameter, page 1 col. 2); specifying one or more declarative annotations (declarative, 3.1.2, p. 8 col. 1 last paragragh, and figure 2) associated with said callback method to cause a compiler to generate one or more persistent components (used to save and maintain the state) maintain conversational state (maintain state, 3.2.1) related to the identified member variable.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Ben-Shachar and Aralanthu's system because Aralanthu's method declarations and member variables would let the callback method able to be called and accessed as the basic programming techniques.

9.   **As to claim 2**, Ben-Shachar teaches wherein said callback method is declared inside a callback interface definition (callback interface, col. 17 lines 42 - 47, col. 25 lines 40 - 45).

10.   **As to claim 10**, this is the software claim of claim 1. See rejection for claim 1 above. Further, Ben-Shachar teaches a callback interface associated with client (callback interface to client, col. 4 lines 12 - 20, col. 8 lines 14 - 23, and col. 11 lines 20 - 52).

11.   **As to claim 43**, this the manufacture claim of claim 1. See rejection for claim 1 above.

12.   **As to claim 44**, see rejection for claim 2 above.

13.   **As to claim 52**, this the manufacture claim of claim 10. See rejection for claim 10 above.

14.   **Claims 20 - 23, 25 - 29, 62 - 65, 67 - 71 are rejected under 35 U.S.C. 103(a)**

as being unpatentable over Arulanthu et al, "Applying C++, Paterns, and

Components to Develop an IDL Compiler for CORBA AMI Callbacks", pages 1 –

13 in view of Ben-Shachar, US patent no. 6,209,018.

15.   **As to claim 20**, Arulanthu teaches a method for specifying logic within a

procedural programming environment for receiving a callback from an asynchronous

web service (asynchronous web service, col. 9 lines 25 - 45 and col. 16 lines 1 - 5), the

method comprising the steps of:

providing a method (callback method with object reference to a reply handler as

a parameter, page 1 col. 2 on section callback model) associated with said member

variable, the method having signature (signature, section 2, 3.2.2, 3.2.4) containing

logic for receiving said callback (operation(callback, args), figure 2) from said

asynchronous web.

Arulanthu does not teach external web service.

Ben-Shachar external web service (multiple servers provide multiple services,

therefore, server 88 can access services of server 54, col. 2 lines 65 - 67, col. 6 lines 17

- 40, col. 9 lines 10 - 45).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine the teaching of Arulanthu and Ben-Shachar's system

because Ben-Sharchar's external web service would provide the service to any machine on any environment within the distributed system via corba service framework.

16.   **As to claim 21**, Ben-Sharchar teaches the step of wherein the method is manually provided by a developer (it is the logic of the program).

17.   **As to claim 22**, Arulanthu teaches the step of wherein the method signature is provided by an integrated development environment based on a specified service description file containing a declaration for said callback (section 2, 3.2.2, 3.2.4).

18.   **As to claim 23**, Arulanthu teaches wherein said method is associated with said member variable using a method naming convention that utilizes the name of said member variable and the name of said callback (figure 2).

19.   **As to claims 25 - 26**, Arulanthu teaches the step of wherein the one or more declarative annotations are specified within the source code (figure 4).

20.   **As to claim 27**, see rejection for claim 20 above.

21.   **As to claim 28**, Arulanthu teaches the step of wherein the one or more declarative annotations are automatically (code generator, 3.1.2) specified by an integrated development environment based upon input provided by a developer.

22.   **As to claim 29,** Ben-Sharhar teaches the step of wherein asynchronous responses from the external web service are passed to said method associated with said member variable (col. 2 lines 65 - 67, col. 6 lines 17 - 40, col. 9 lines 10 – 45).

23.   **As to claim 62**, this the manufacture claim of claim 20. See rejection for claim

20 above.

24.   **As to claims 63 - 65**, see rejection for claims 21 - 23 above.

25.   **As to claim 67 - 71**, see rejection for claims 25 - 29 above.

26.   **Claims 38 - 42, 80 - 84 are rejected under 35 U.S.C. 103(a) as being**

unpatentable over Schofield, US patent no. 6,253,252 in view of Grant, US Pub no.

20020099738.

27.   **As to claim 38**, Schofield teaches a web service, a method comprising the steps

of:

Receiving by the server a message (server is inherent in client-server

environment for receiving the message transmitted from client-side, col. 10 lines 10 -

15) identifying a callback address (the object address call's input parameters, col. 9

lines 55 - col. 10 lines 35) including a callback method (object's method to be called),

and a proxy object identifier (proxy handle);

determining on one or more computing device (machines, col. 5 lines 20 - 65) a

method to be invoked based at least in part upon the proxy object identifier (the client

stub information received in the form of proxy handle .... Server application call these

stub function to notify which methods to ... corresponds to the stub, col. 7 lines 58 – col.

8 lines 12), and the callback method (used input parameters and carried out the request), and

routing the calling the method to be invoked (inherent when call the appropriate method).

Schofield does not explicitly teach extract the message.

Grant teaches the step of extracting the message (extracting in parsing process, col. 3 [0037] and [0041].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Schofield and Grant's system because Grant's parsing the input message is well known to be necessary for the server to understand the content of the message from the sender format.

28.   **As to claim 39**, Grant teaches the step of wherein the callback address comprises a URL (URL, 0267) indicating a location where the web service listens for callbacks from the external web service.

It would have been obvious to one o of ordinary skill in the art at the time the invention was made to recognize that the web address would comprise the URL.

29.   **As to claim 40**, Schofield teaches the step of wherein the callback address includes proxy object identifier (col. 9 lines 35 – 40).

30.   **As to claim 41**, Schofield teaches the step of wherein the message further

identifies a callback instance identifier (call identifier, col. 8 lines 35 - 45 and col. 13

lines 25 - 35).

31.   **As to claim 42,** Schofield teaches the step of wherein routing further comprises

identifying a callback instance based at least in part upon the callback instance identifier

(specified object to be called, col. 9 lines 55 - col. 10 lines 10); and routing the request

to a method associated with the identified callback instance.

32.   **As to claim 80**, this is the article claim of claim 38. See rejection for claim 38

above.

33.   **As to claims 81 - 84**, see rejection for claims 38 - 42 above.

34.   **Claims 30 - 32, 35 - 36, 72 - 74, 77 - 78 are rejected under 35 U.S.C. 103(a) as**

being unpatentable over Schofield, US patent no. 6,253,252 in view of Ben-

Shachar, US patent no. 6,209,018.

35.   **As to claim 30**, Schofield teaches a web service, a method comprising the steps

of:

generating by the device a request (call from client through the internet, col. 10 .

lines 50 - 65 and col. 4 lines 65 - 67) to a web service using a proxy object (compiler

produced client stub object, col. 7 lines 25 - 40), previously generated by a compiler

based upon a service description file (IDL compiler and code generator are combined to

generate code directly from the source file 101, wherein the code including client stub

object, col. 7 lines 10 - 60), wherein the request includes a callback address (containing

address, col. 10 - lines 1 - 10 and col. 12) to identify a location to which the external

web service should return a response,

transmitting on one or more computing devices, (machines, col. 5 lines 20 - 65)

the request as a request message to the external web service using

one or more transmission protocols (network protocol, col. 6 lines 14 - 17) and

receiving on one or more computing devices, (machines, col. 5 lines 20 - 65) an

asynchronous response from the external web service (a response is returned to client,

col. 11 lines 20 - 30 and col. 8 lines 18 - 22).

Schofield does not explicitly teach that the description file associated with the

external web service, and the request is from a server. However, Schofield teaches the

description file is compiled and linked to client and server (col. 7 lines 10 - 60).

Ben-Shachar server access external web service (multiple servers provide

multiple services; therefore, server 88 can access services of server 54, col. 2 lines 65 -

67, col. 6 lines 17 - 40, col. 9 lines 10 - 45).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine the teaching of Schofield and Ben-Shachar's system

because Ben-Sharchar's external web service would provide the service to any machine

on any environment within the distributed system via corba service framework.

36.   **As to claim 31**, Schofield teaches the step of wherein the callback address

includes proxy object identifier (store address in the proxy, col. 9 lines 35 - 40).

37.   **As to claim 32**, Schofield teaches the step of wherein the callback address is

included within one or more headers of the request message (header file 119, col. 7.

lines 40 - 50).

38.   **As to claim 35**, Schofield teaches the step of a callback instance identifier

representing a specific instance of the requesting web service to which asynchronous

responses are to be routed (asynchronous response, col. 8 lines 45 - 65).

39.   **As to claim 36**, Schofield teaches the step of wherein and the callback instance

identifier is included within one or more headers of the request message (header file

119, col. 7. lines 40 - 50).

40.   **As to claim 72**, this is the manufacture claim of claim 30. See rejection for claim

30 above.

41.   **As to claims 73 - 74**, see rejection for claims 31 - 32 above.

42.   **As to claims 77 - 78**, see rejection for claims 35 - 36 above.

43.   **Claims 33, 34, 37, 75, 76, 79 are rejected under 35 U.S.C. 103(a) as being**

unpatentable over Schofield, US patent no. 6,253,252 in view of Ben-Shachar, US

patent no. 6,209,018, and further in view of Grant, US Pub no. 20020099738

44.   **As to claim 33**, Schofield and Ben-Shachar does not SOAP message.

Grant teaches the step of wherein the request message is a SOAP based message (soap message, fig. 3).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Schofield, Ben-Shachar, and Grant's system because Grant's SOAP message would provide a well-known protocol to transfer the request through the internet.

45.   **As to claim 34,** Grant teaches wherein the callback address comprises a URL (url, [0267]) identifying a location where the web service is listening for a response from the external web service.

46.   **As to claim 37**, see rejection for claim 33 above.

47.   **As to claims 75, 76, and 79,** see rejection for claims 33, 34, and 37 above.

Allowable Subject Matter

48.   Claims 12 – 19, 54 – 61 are allowed.

49.   Claims 4 - 9, 46 - 51 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Reason for Allowance

50.   The following is an examiner's statement of reasons for allowance:

51.   As to claims 12 and 54, the steps of invoking by the server the requested web service method including passing programming language objects as parameters to the web service method, the programming language objects having been mapped from the data representation language elements of the message, was not uncovered in the prior art of record, not was any evidence uncovered to provide motivation to combine the prior art in a manner as to result in the invention as claimed in claims 12 and 54.

52.   As to claim 4, the steps of wherein the one or more declarative annotations indicate to the compiler whether the identified method is at least one of a start method, a continue method, and a finish method, wherein the start method applies to the start of a stateful conversation between the client and the web service, the continue method applies to the continuation of an ongoing stateful conversation between the client and the web service, and the finish method applies to the completion of an ongoing stateful conversation between the client and the web service, in the context of the independent claim taken together was not uncovered in the prior art of record, not was any evidence uncovered to provide motivation to combine the prior art in a manner as to result in the invention as to result in the invention as claim in claim 4 with the limitation of the independent claims1 and any interceding claims.

53.   As to claim 9, the steps of wherein the one or more declarative annotations

indicate to the compiler whether the identified callback method is buffered, causing the

compiler to instantiate one or more queues to temporarily store one or more

asynchronous responses for delivery to the client when the client is able to receive the

responses, in the context of the independent claim taken together was not uncovered in

the prior art of record, not was any evidence uncovered to provide motivation to

combine the prior art in a manner as to result in the invention as to result in the

invention as claim in claim 9 with the limitation of the independent claim 1 and any

interceding claims.

54.   As to claim 46, this claim is similar as claim 4. It is allowed as the same reason

above.

55.   As to claim 51, this claim is similar as claim 9. It is allowed as the same reason

above.

Response to Arguments

56.   Applicant's arguments filed 2/7/07, regarding to claims 1 – 2, 10, 20 – 23, 25 –

44, 46 – 52, 54 – 65, 67 - 84 have been fully considered but they are not persuasive.

57.   Responses to arguments

(1)   Ben-Shachar does not teach a service proxy at the client for making

function calls to remote servers, a specified member variable which causes a

compiler to generate the service proxy (p. 21 lines 3 – 16), a compiler to

generate one or more persistent components maintain conversational state.   In

response, applicant amitted that the service proxy read on the proxy object in

claim 1 (p. 21 lines 11 – 12). Examiner cited Arulanthu for teaching a specified

member variables which causes a compiler to generate the service proxy (see

rejection above). Examiner did not cite Be-Shachar for teaching compiler to

generate one or more persistent components maintain conversational state.

Examiner cited Arulanthu for teaching compiler to generate one or more

persistent components (used to save and maintain the state) to maintain

conversational state (maintain state, 3.2.1).

(2)   Arulanthu teaches callback method is at the client, not the server (p. 21

last paragraph). None of the annotations are declarative (p. 10). In response,

applicant did not claim the callback method at the server. Arulanthu teaches

annotations are declarative (declarative, 3.1.2, p. 8 col. 1 last paragragh, and

figure 2), and it is the basic programming techniques that all variables have to be

declared before used.

(3)   Schofield does not teach the determining of an appropriate method based

on a proxy object handle (p. 26). In response, Schofield teaches determining of an

appropriate method based on a proxy object handle (the client stub information received

in the form of proxy handle .... Server application call these stub function to notify which

methods to ... corresponds to the stub, col. 7 lines 58 – col. 8 lines 12).

(4)   Schofield does not teach proxy object generated based on a service

description file of the external web server. In response, applicant did not exactly claim

proxy object generated based on a service description file **of** the external web server.

Conclusion

58.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

59.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Phuong N. Hoang whose telephone number is

(571)272-3763. The examiner can normally be reached on Monday - Friday 9:00 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Thomson can be reached on 571-272-3718. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ph
April 12, 2007

WILLIAM THOMSON
SUPERVISORY PATENT EXAMINER